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PHOTOGRAPHS AND DESCRIPTIONS OF CUP-FUNGI—III. PEZIZA DOMICILIANA AND PEZIZA REPANDA

FRED J. SEAVER

(WITH PLATES 188 AND 189, CONTAINING 4 FIGURES)

The above species of fungi, on account of their superficial resemblance, have been frequently confused. Indeed there might be some difference of opinion as to whether the two represent different species or only forms of the same species whose differences are due entirely to the difference of habitat.

Peziza domiciliana was originally described by Cooke from specimens found growing on the walls, ceilings, and floors of a house which had been partly destroyed by fire. The specific name is a very appropriate one, since, from our own observations, the species usually occurs about the cellars of houses and in caves.

The species was first encountered by the writer in Iowa, where it was found growing in the basement of one of the college buildings at Iowa Wesleyan University. There it grew on piles of damp coal-dust which had been left over from the winter's supply. The plants were described and illustrated in Iowa Discomycetes under the name of *Peziza repanda* Pers.

The species was next found in the basement of the museum building of the New York Botanical Garden where the ground was kept moist by the drip from an ice-box. The plants grew on sandy or gravelly soil, as indicated by the particles adhering to the base of the apothecia.

On March 10, 1914, the writer received still other specimens from Mr. Carl A. Schwarze, of the New Jersey Agricultural Experiment Station. These plants, which were found growing in the sand of a cutting bench in one of the greenhouses, were accompanied by the following description: "First of all the plants were gregarious, had a short but distinct stem, cups concave, nearly white and translucent when young, a yellowish-brown

when old, later becoming repand and umbelicate, and more or less angular. The stem is obscured by the expanding disc. The largest disc became convex and measured at least 10 cm."

In April of the same year, similar specimens were collected by Mr. L. O. Overholts in a mushroom cellar in Missouri. These specimens, which were referred to the writer, were accompanied by the following description: "Cups 3-8 cm. broad, somewhat stipitate, margin involute, depressed in the center, hymenium smooth, ochraceous-buff (Ridgw.) or somewhat more brownish, exterior covered with white meal."

All of the American specimens referred to above agree well with specimens of *Peziza domiciliana* from the herbarium of Cooke, so far as we can judge from dried specimens. According to Cooke, the apothecia are sessile, although in our American specimens they are, at least when young, short-stipitate. Also we have not noted any of the violet tints referred to by Cooke, although in his original description he allows for a rather liberal range of color. The spore measurements of the American and European specimens are identical. The young plants are always pure-white and usually the flesh when broken turns golden-yellow. This fact was noted by Bresadola and was found to be true of specimens collected in New York. Whether this character is constant, we are unable to say, since no attention was given to this in some of the plants when fresh. From the studies which have been made, the writer feels safe in referring our American plants to *Peziza domiciliana* Cooke, and also in regarding this species as distinct from *Peziza repanda* Pers.

Peziza repanda was described by Persoon, the original description being accompanied by an excellent colored figure. Although the species was originally reported on the ground by Persoon, subsequent authors have usually reported them on rotten logs. Whether Persoon's species actually grew on soil which was un-mixed with wood it is impossible to determine, although it is not difficult to believe that the species might grow on either. Aside from this incident, Persoon's description and illustration fits the plants which are usually referred to this name. The following descriptions and illustrations will give a fair idea of our conception of the two species.

PEZIZA DOMICILIANA Cooke, Gardener's Chronicle 41: 793. 1877

?*Octospora varia* Hedw. Descr. 2: 22. 1788.

Peziza Adae Sadler; Cooke, Trans. Bot. Soc.. Edinburgh, 13: 45. 1877.

Peziza odorata Peck, Bull. Torrey Club 23: 420. 1896.

Peziza varia f. *typica* Bres. Fungi Trid. 2: 75. 1898.

Apothecia gregarious or occasionally cespitose, usually short-stipitate when young, at first concave, soon becoming repand, leaving a depression in the center, at first rounded, becoming irregular and often decidedly angular, externally white, the margin entire or occasionally splitting, reaching a diameter of 10 cm., the substance when broken often turning golden-yellow; hymenium at first concave, becoming plane or convex and distinctly umbilicate, at first white, becoming dingy buff or brownish; stem not exceeding 1 cm. in length, thick, irregular, white, becoming obsolete with age; asci cylindric or subcylindric, reaching a length of 225 or 250 μ and a diameter of 15 μ ; spores ellipsoid, hyaline when young, often containing two small oil-drops, 13-15 \times 8-10 μ ; paraphyses slender, septate, slightly enlarged above.

In cellars, mushroom-caves, and occasionally in greenhouses, usually growing on plaster, sand, gravel and coal-dust.

TYPE LOCALITY: Europe.

DISTRIBUTION: New York to Iowa and Missouri.

ILLUSTRATION: Trans. Bot. Soc. Edinburgh 13: pl. 3, f. a-i; Cooke, Mycographia, pl. 97, f. 349; Bres. Fungi Trid. pl. 188; Bull. Lab. Nat. Hist. State Univ. Iowa 6: pl. 15, f. 2 (as *Peziza repanda* Pers.).

PEZIZA REPANDA Pers. Ic. Pict. Fung. 49. 1806

Peziza pallidula Cooke & Peck; Cooke, Bull. Buffalo Acad. Sci. 2: 288. 1875.

Peziza repanda amplispora Cooke & Peck; Cooke, Bull. Buffalo Acad. Sci. 2: 288. 1875.

Peziza amplispora Cooke, Mycographia 167. 1877.

Aleuria repanda Gill. Champ. Fr. Discom. 43. 1879.

Peziza Stevensoniana Ellis; Rehm Ascom. Lojk. 3. 1882.

Geopyxis pallidula Sacc. Syll. Fung. 8: 70. 1889.

Geopyxis amplispora Sacc. Syll. Fung. 8: 71. 1889.

Discina repanda Sacc. Syll. Fung. 8: 100. 1889.

Plicaria repanda Rehm; Rab. Krypt.-Fl. 1³: 1007. 1896.

Pustularia Stevensoniana Rehm; Rab. Krypt.-Fl. 1³: 1019. 1896.

Peziza varia f. *lignicola* Bres. Fungi Trid. 2: 76. 1898.

Apothecia sessile or very short-stipitate, at first cup-shaped, the margin even or crenate, externally white or whitish, expanding and becoming repand, the margin remaining entire or splitting, regular in outline or irregularly revolute, reaching a diameter of 8–10 cm.; stem short, stout, usually only a few mm. long or entirely wanting; hymenium concave, becoming plane or convex, pale-brown, becoming darker with age, even or convolute; asci cylindric or subcylindric, reaching a length of 225μ and a diameter of $12\text{--}15\mu$; spores ellipsoid, hyaline, smooth, $14\text{--}16 \times 8\text{--}10\mu$; paraphyses slender, slightly enlarged above, yellowish or brownish.

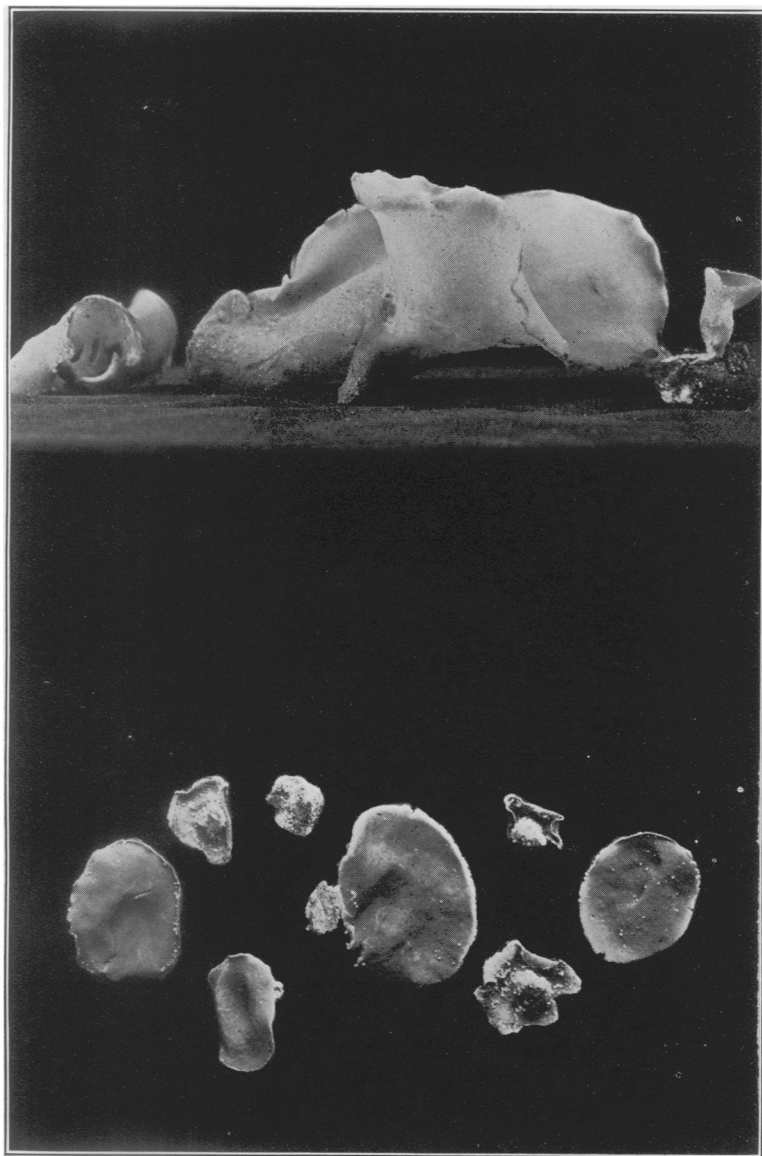
On rotten logs or occasionally on soil or chip piles.

TYPE LOCALITY: Europe.

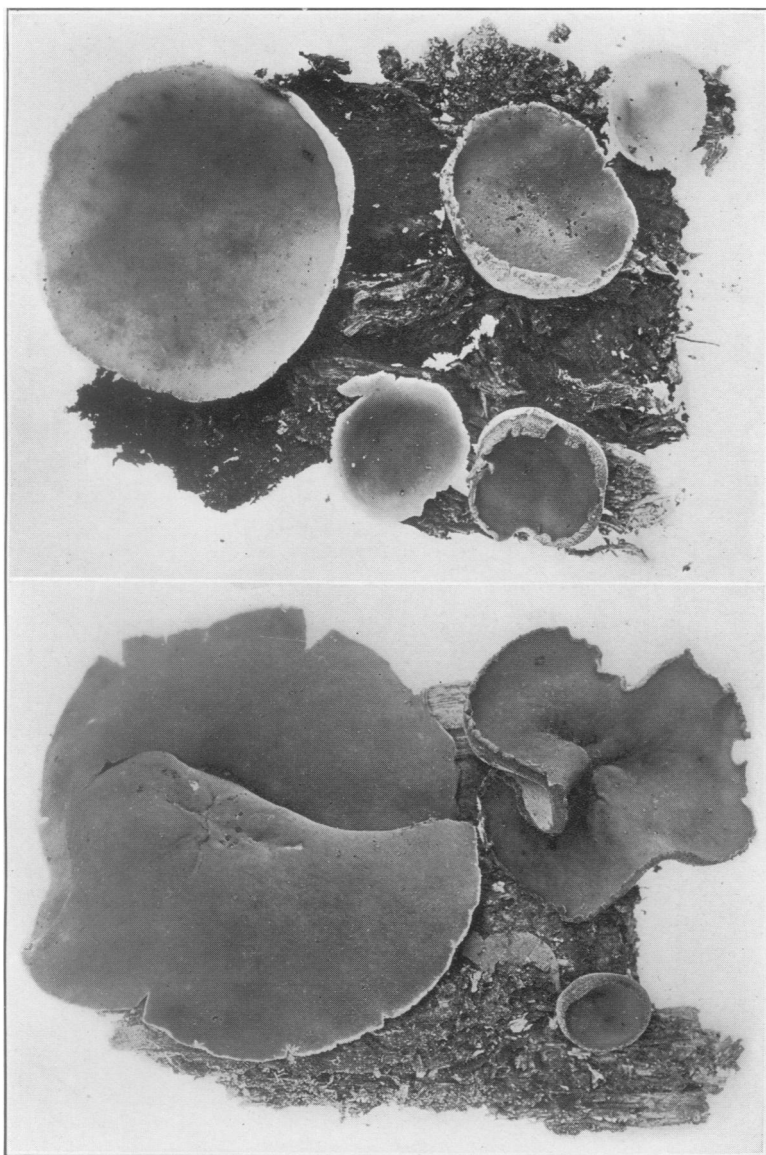
DISTRIBUTION: New York to Iowa and Maryland; also in Europe.

ILLUSTRATION: Pers. Ic. Pict. Fung. *pl.* 20, *f.* 2; Cooke, Mycographia *pl.* 62, *f.* 240; Bres. Fungi Trid. *pl.* 189; Minn. Bot. Studies 4: *pl.* 15; Minn. Pl. Diseases *f.* 64.

NEW YORK BOTANICAL GARDEN.



PEZIZA DOMICILIANA COOKE



PEZIZA REPANDA PERS.